

Physics and Engineering

1966-1/17

controlled power plant operation. In February 1966, a unique automatic workshop was put into operation at the First Moscow Bearing Works. In the USSR almost 90% of the steel is smelted in automated furnaces giving a yearly economy of 450,000 t of fuel and an increase of 3 million t of steel. Experiments are being made at the "Azovstal'" plant for a complex automation of blast-furnace plants. In the USSR a large number of completely automated cement factories are in continuous operation.

Thereafter the author deals with the question of electronic devices. He mentions the Soviet computing machines "BSCM", "Strela", the small-sized universal machine "M - 2", the series universal machines "Ural", the special purpose machine "Pogoda" (for weather forecast). Academician S.A. Lebedev and Yu.Ya. Bazilevskiy have been awarded the title of 'Hero of Socialist Labor' for their work on electronic computing machines.

In conclusion the author refers to the geophysical methods of prospecting deposits of oil, coal, iron and other ores, to the development of biophysics, and physics of super-high pressures and super-high temperatures. In the latter the Academician L.A. Artsimovich achieved an increase in the temperature of plasma (a mixture of electrons and deuterons, of several million degrees.

AVAILABLE:  
Card 4/4

Library of Congress

PISARZHEVSKIY, Oleg

Only upward, only forward. IUn.tekh. 3 no.12:1-7 D '58.  
(MIRA 12:1)  
(Economic policy)

AUTHOR: Isarzhewskiy, Oleg

SOV-A-58-9-1974

TITLE: The Destiny of Professions (Sud'ba professiy)

PERIODICAL: Znaniye-sila, 1958, Nr 9. pp 10-12 (U.S.S.R.)

ABSTRACT: As time passes, some professions vanish and new ones are created as a result of technical development. It is wrong to believe that automation, simplifying the operating of machines, needs less qualified workers. Automation improves working conditions, but not because it makes the work simple and monotonous. There are 6 illustrations.

1. Machines--Equipment 2. Personnel--Training

Card 1/1

PISARZHEVSKIY, Oleg

On the threshold of the seven-year plan. Izobr. i rats. no. 11:1-6  
N '58. (MIRA 11:1-7)

(Economic policy)

PISARZHEVSKIY, Oleg

Great labor offensive. Znan.sila 33 no.12:1-3 D '58.  
(MIRA 11:12)  
(Russia--Economic conditions)

PISARZHEVSKII, Oleg Nikolayevich; KAPUSTINSKII, A.F., otv.red.; KLYAUS,  
Ye.M., red.ird-va; ASTAF'YEVA, G.A., tekhn.red.

Dmitrii Ivanovich Mendeleev, 1834-1907. Moskva, Izd-vo Akad.  
nauk SSSR, 1959. 389 p. (MIRA 12:9)  
(Mendeleev, Dmitrii Ivanovich, 1834-1907)

ACHARKAN, V.A.; BARSKOV, I.M.; BIRYUKOV, I.S.; BORODINA, L.Ya.; BRENNER, M.M.;  
 GOMELIK, B.Ye.; GUMEROV, M.N.; ZORKAYA, N.M.; IOYNTSE, A.I.;  
 KAYDALOVA, O.N.; KAPUSTIN, Ye.I.; LEBKHEVA, M.A.; LESKOVTSYEV, V.A.;  
 LYSSENKO, V.P.; MARKIN, A.B.; MIKHAYLOV, N.N.; NEST'YEV, I.V.; NECHAYEV,  
 N.V.; NIKOL'SKIY, A.V.; OSTROUKHOV, M.Ya.; PISARENKOVSKIY, O.N.;  
 POLUBOYARINOV, M.N.; POPOV, Yu.N.; PRASOLOV, N.A.; POKATAYEV, Yu.N.;  
 RIMBERG, A.M.; RYABOV, V.S.; SEMKOV, B.F.; SPERANSKAYA, Ye.A.; TAKOYEV,  
 K.P.; TRIFONOVA, O.K.; TROFIMOVA, V.I.; SHAHMALAZAROV, O.Kh.; SHKARIN-  
 KOVA, O.P.; SEMERLING, K.G.; SYDEL'MAN, B.I.; MIKALYAN, E.A., red.;  
 MUKHIN, Yu.A., tekhn.red.

[U.S.S.R. as it is; a popular illustrated handbook] SSSR kak on est';  
 populiarnyi illiustrirovannyi spravochnik. Moskva, Gos.izd-vo polit.  
 lit-ry, 1959. 462 p.

(MIRA 12:2)

(Russia)

PISARZEL'SKIY, Oleg; Nikolayevich; KAPUSTINSKIY, A.P., otv.red.; KLYAUS,  
Ye.M., red.isd-va; ASTAP'YEVA, O.A., tekhn.red.

Dmitrii Ivanovich Mendeleev, 1834-1907. Moskva, Izd-vo Akad.  
nauk SSSR, 1959. 389 p. (MIRA 14:1)  
(Mendeleev, Dmitrii Ivanovich, 1834-1907)



PISARZHEVSKIY, Oleg

Your seven-year plan. IUn.tekh. 3 no.2:10-13 7 '59.

(MIRA 12:1)

(Economic policy)

PISARZHEVSKIY, Oleg

The sun rises to its zenith. Rabotnitsa 37 no.10:2 of cover-3  
0 '59. (MIRA 13:2)

(Russia--Economic conditions)

PISARZHEVSKIY, Oleg; ANTIPINA, L., red.; GRIGOR'YEVA, Ye., tekhn. red.

[From eight to five] Ot vos'mi - k piati. Moskva, Izd-vo "Molodaia gvardiia," 1960. 16 p.  
(Hours of labor) (MIRA 14:7)

PISARZHEVSKIY, Oleg

The wings of the seven-year plan. Okhr.truda i sots.strakh.  
3 no.6:6-11 Je '60. (MIRA 13:7)  
(Automation)

PISARZHEVSKIY, Oleg

Earth "corona." IUn.tekh. 4 no.7:20-21 J1 '60. (MIRA 1) 9)  
(Cosmic rays)

PISARZHEVSKIY, Oleg

Preparing for the decisive jump. *IUn.Tekh.* 4 no.8:14-18 Apr '60.  
(MIRA 13:9)

(Space flight)

PISARZHEVSKIY, Oleg [Pisarshevs'kyi, Oleh]

The era of boundless prospects (to be concluded). Nauka i  
sbyt' 10 no.7:22-25 J1 '60. (MIRA 13:7)  
(Technology)

PISARZHEVSKIY, Oleg [Pysarshevs'kyi, Oleh]

The age of unlimited choice. Nauka i zhyttia 10 no. P:25-26  
Ag '60. (MIRA 13:P)  
(Polymers)



PISARZHEVSKIY, Oleg; VLADIMIROV, R.; POPOVA, E.

Youth wants to know more about science. Tekh. mol. 28 no. 12:32-  
33 '60. (MIRA 13:12)

(Bibliography--Science--Juvenile literature)

PISARZHEVSKIY, Oleg

"Ural pathfinder." *IUn.tekh.* 5 no.4.33-35 Ap '61. (M.I. 14:3)  
(Geology—Juvenile literature)

PISARZHEVSKIY, Oleg

Outstanding naturalist. Nauka i zhizn' 28 no.3:50-51 Mr '61.

(MIRA 14:3)

(Zelinskii, Nikolai Dmitrievich, 1861-1953)

PISARCHEVSKIY, Oleg Nikolayevich; SKONECHNAYA, A.T., red.

[In the fervor of quests; strokes in the creative  
portrait of M.N.Semenov! V ognе iskanii; shtrikni  
tvorcheskogo portreta M.N.Semenova. Moskva, Sovetskaya  
mossia, 1966. 131 p. (MIRA 12 4

LADA, Igor' Vasil'yevich; PISARZHEVSKIY, Oleg Nikolayevich  
[deceased]; GLADKOV, T., red.

[Outlines of the future] Kontury griadushchego. Moskva, Znanie, 1965. 379 p. (MIRA 18:7)



PISARZHEVSKIY, Oleg

Why did he steal radioactive cobalt? Nauka i zhizn' 30 no.5:  
50-51 My '62. (MIRA 16:10)

PISARZHEVSKIY, Oleg, pisatel', laureat Gosudarstvennoy premi

A romantic of communism. Tekh. mol. 31 no.8:8-9 '63.  
(MIRA 16:11)



PISARZHEVSKII, Oleg

Meeting scouts of the future. Nauka i zhizn' 28 no.5:1-7 My '62.  
(MIRA 14:6)

(Agricultural research)  
(Agricultural machinery—Exhibitions)

PISARZHEVSKIY, Oleg

Reconstruction of a variety. Nauka i shizn' 30 no.4:51-55  
Ap '63. (MIRA 16:7)

(Polyploidy) (Sugar beet breeding)

PISARZHEVSKIY, Oleg

Science on the march. Nauka i zhizn' 29 no.6:2-4 Je '62.  
(MIRA 15:10)

1. Chlen redaktsionnoy kollegii zhurnala "Nauka i zhizn'".  
(Cosmic rays)

PISARZHEVSKIY, Oleg, pisatel'

"The powerful atom" by V. Orlov. Reviewed by O. Pisarshevskii.  
Tekh.mol. 30 no.10:32-33 '62. (MIRA 15:12)  
(Atomic energy--Popular works)

LEVINA, S.S.; PISARZHEVSKIY, O.N., FOMINA, Ye.N., red.; VASIL'YEVA,  
L.P., tekhn. red.

[Physics and chemistry; index of popular literature] Fizika i khimiya; ukazatel' nauchno-populiarnoi literatury. Izd.2., dop. i perer. Moskva, Gos.ordena Lenina biblioteka SSSR, 1963. 150 p. (MIRA 16:7)  
(Bibliography--Physics) (Bibliography--Chemistry)

LEVINA, S.S.; PISARZHEVSKIY, C.N., nauchnyy red.; FOMINA, Ye.N., red.;  
VASIL'YEVA, L.P., tekhn. red.

[Physics and chemistry; annotated index of popular scientific literature] Fizika i khimiya; ukazatel' nauchno-populiarnoi literatury. Izd. 3., dop. i perer. Moskva, Gos. biblioteka SSSR im. V.I. Lenina. 1963. 150 p. (MIRA 16:9)  
(Bibliography--Physics) (Bibliography--Chemistry)

PISARZHEVSKIY, O.N.; KHMEL'NITSKAYA, L., red.; MAYOROV, V., tekhn.  
red.; SINYUKHIN, V., tekhn. red.

[Science on the march] Nauka na marshe; putevoditel'-ocherk.  
[By] O.Pisarzhevskii. Moskva, Gostoptekhizdat, 1962. 40 p.  
(MIRA 15:12)

1. Moscow. Vystavka dostizheniy narodnogo khozyaystva SSSR.  
(Moscow--Exhibitions) (Technological innovations)  
(Research)

PISARZHEVSKIY, Oleg Nikolayevich; REVNik, S., red.; PETROVA, L.,  
tekhn. red.

Prianishnikov. Moskva, Molodaya gvardiya, 1963. 237 p.  
(Seriya biografiy: Zhizn' zamchatel'nykh liudei, no.14)  
(MIRA 17:2)



PISARZHEVSKIY, Oleg Nikolayevich; ANTONYUK, L., red.; LUBKOVA, V .  
tekh. red.

[Ancient and modern science] Nauka drevniaia i molodaia.  
Moskva, Izd-vo "Molodaia gvardiia," 1962. 205 p.  
(MIRA 15:9)

(Chemistry—History)

PISARZHEVSKIY, OLEG

Man, the master of the world. Nauka i zhizn' 28 no.11:2-9  
N '61. (MIRA 14:12)

(Communism)  
(Economic conditions)

PISARZHEVSKIY, Oleg Nikolayevich; SHUSTOVA, I.B., red.; NAZAROVA, A.S.,  
tekhn. red.

[Science and the conquest of nature] Nauka i pokorenie prirody.  
Moskva, Izd-vo "Znanie," 1962. 46 p. (Narodnyi universitet kul'-  
tura: Estestvennonauchnyi fakul'tet, no.6) (MIRA 15:6)  
(Natural resources)

PISARZHEVSKIY, Oleg

Sister of work. Nauka i zhizn' 28 no.7:2-12 J1 '61. (MIRA 14:8)

(Science) (Technological innovations)

PISARZHEVSKIY, Oleg Nikolayevich; GIL'GULIN, M., red.; DANILINA, A.,  
tekhn. red.

[Pages from the life of a Bolshevik and scientist; L.IA.Karpov]  
Stranitsy zhizni bol'shevika-uchenogo; o L.IA.Karpove. Moskva,  
Gos.izd-vo polit.lit-ry, 1960. 30 p. (MIRA 15:1)  
(Karpov, Lev IAKovlevich, 1879-1921)



PISAU, Gheorghe, ing., candidat in stiinte tehnice

Railroad electric joints. Rev caiilor fer 12 no.10:550-  
557 0 '64.

PISCA, L., dr.

Invalidity and further gainful occupation. See revue 7 no.6:  
262-272 '61.



PISCA, Ladislav; SURAN, Jozef

Wages, age and pensions. Soc revue 8 no.6:252-271 '62.

PISCA, Ladislav

Changes in the concept of social security. Sec revus 8 no. 4/5:213-215  
'62.

PISCA, Ladislav

New features in social distribution and their importance for  
social security. Soc revue 8 no.3:97-113 '62.

FISCA, Ladislav, dr.

Tasks of social and economic research on social security. See review  
8 no.2:58-69 '62.

PISCA, L., dr.

Invalidity and further gainful activities. Soc revue 7 no.5:221-227  
'61.

(Disabled)

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Y/002/62/000/007/001/002  
D267/D308

AUTHOR: Piščanč, R.

TITLE: Transport of liquid oxygen in Yugoslavia

PERIODICAL: Kemija u industriji, no. 7, 1962, 389 - 391

TEXT: Liquid oxygen was first transported in Yugoslavia in a steel tank in July 1949, over a distance of 211 km. The loss by evaporation during 16 1/2 hours was 81 kg; since the initial quantity was 1,689 kg, the loss per hour amounted to 0.29 % per hour. At its destination the oxygen was vaporized in a coil connected with the tank and heated with boiling water; the pressure of evaporation was 0.3 kg/cm<sup>2</sup>, and the process lasted ~60 hours. The transport of liquid oxygen in tanks is analyzed from the economic viewpoint. No local stations (to be supplied with oxygen from tanks) where oxygen cylinders could be filled have so far been generally adopted in Yugoslavia, although the transport from liquid oxygen plants to several ironworks has been steadily increasing over the past 12 1/2 years. Thus, in 1961, 564 metric tons of liquid oxygen were transported in 306 tanks. ✓B

Card 1/1

PISCANEC, Ivo

Origin and development of the "Boris Vidric" Railroad Car Factory.  
Stroj vest 7 no. 4-5:149-150 C 61.

PISCANC, R. (Ruse)

Transport of oxygen in Yugoslavia. Kemija u industriji 11  
no.7:389-391 J1 '62.



IONESCU, Florica (Bucuresti); ISUTU, C. (Craiova); MATIL,  
Augustin I. (Cluj); NARCEANU, Irigen (Craiova);  
SANDU, Ilie (Sibiu); SESTIY, Tiberiu (Tg. Mures);  
CERBA, Miron (Iloiesti); BACINA, V. (Breaza); IONESCU,  
Ilie (Pitesti); REINERDING, Emilia (Bucuresti); MATIL,  
Emilian (Bucuresti); MATU, Constanta (Bucuresti);  
FRANITCHI, Teodor (Tg. Mures)

Examination questions Gaz mat P 1<sup>a</sup> no. 6:260-264 de Inv.

PISCEVIC, Stanislav, sarjetatski pukovnik, dr.; PISCEVIC, Stanislav, sarjetatski  
pukovnik, dr.; KRAJČIĆ, Dragoljub, sarjetatski pukovnik, dr.;  
KRASOJEVIC, Dragoljub, sarjetatski kapetan, dr.

A case of combined injuries with severe hemorrhage. Vojnosanit.  
pregl. 21 no.4:253-256 Apr 64

1. Vojnomedicinska praksa na Brijunima. Kliničke primjere  
bolesti.



PISCHEVIC, Stanislaw, son of 19681 71-001 8 17.

VARIOUS VIEWS OF THE "WATER" THEORY OF THE "WATER" THEORY.

1. Summary.

2. The purpose of this report is to provide a summary of the information received from the source.

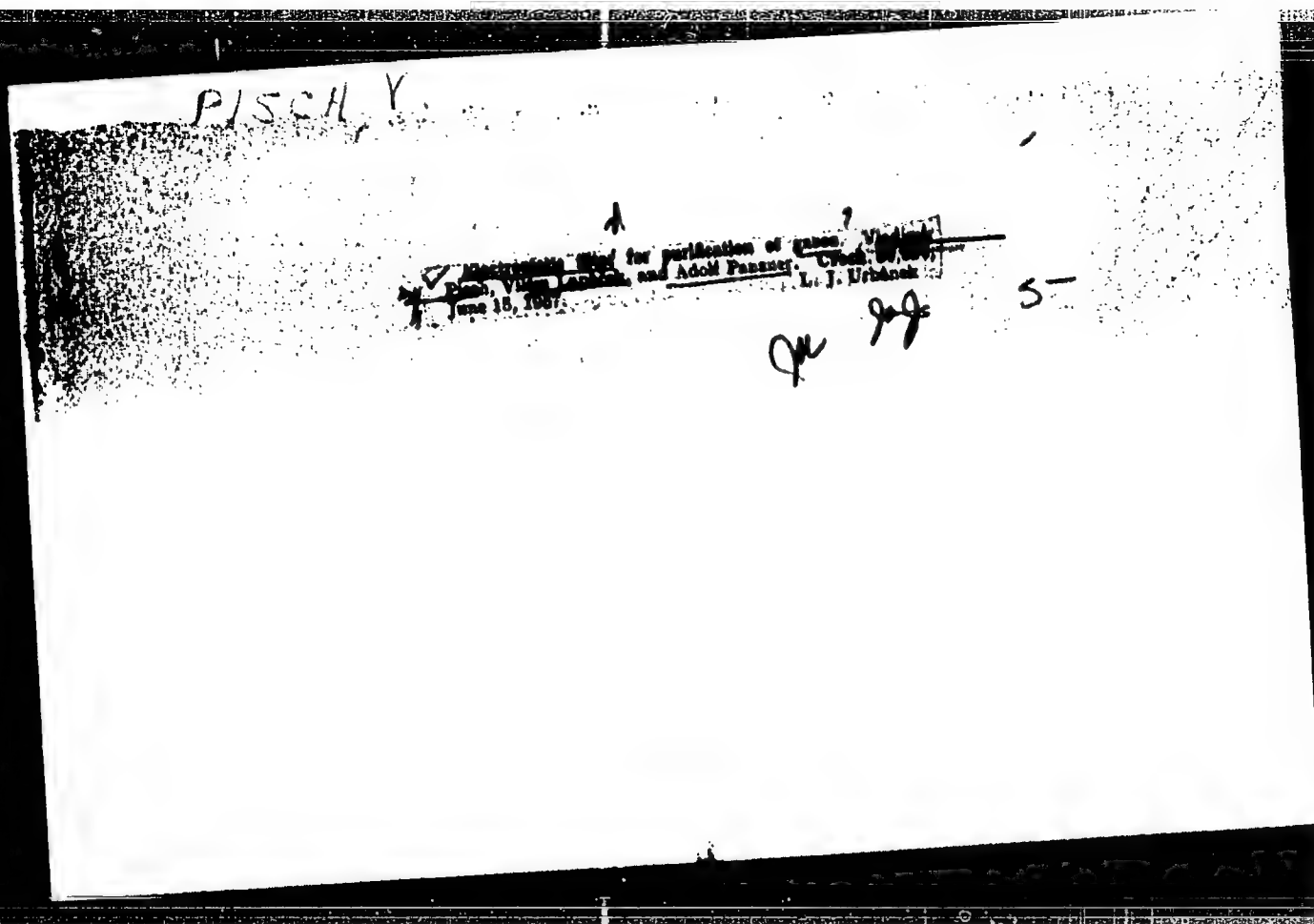
3. The information received from the source is as follows:



**KRALJIC, Ljubošir; MAGAZINOVIC, Vojislav; PISCHVIC, Stanimir; GINZBERG, Ervin;**  
**VAŠKOVIC, Ljubošir**

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PISCH, Vladimir, inz.

Fifteen years of nondestructive materials testing in Czechoslovakia.  
Slaboproudý obzor 21 no.12:734-738 D '60. (EEAI 10:3)

1. Chirana, Praha, n.p., zavod 5 Chotitice.  
(Czechoslovakia--Nondestructive testing)

124-1957-2-1829

Translation from Referativnyy zhurnal Mekhanika, 1957, Nr 2, p. 53 (USSR)

AUTHOR P. Scherbakov, V. V.

TITLE On the Peculiarities of the Mixture Formation in the Cylinder of High-Powered Low-Speed Marine Engines (Ob osobennostyakh smeseobrazovaniya v tsilindre tikhokhodnogo sudovogo dvigatelya bol'shoy moshchnosti)

PERIODICAL Nauchn. tr. Odessk. vyssh. morekhod. uch.-zhcha, 1955, Nr 1, pp. 89-100

ABSTRACT The first in a projected series of articles of design and operational problems of a mixture-forming system with a forced perturbed flow in a single-chamber engine having a large-bore cylinder. An analysis of the conditions for jet-wise combustion is presented. The Author comes to the conclusion that the only practical method of mixture formation for high-powered engines is the formation of mixing jets with an intense and correctly controlled turbulence.

V. N. Gusev

Summary of the article in the journal "Mekhanika" - Appendix 1  
to the book "Mekhanika" - Appendix 1

Card 1 of 1

SOV 124 58 2 17

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2 p 19 (USSR)

AUTHOR: Pischanenko, V. V.

TITLE: Investigation of the Dynamics of Eddy Formation in a Plane Cylindrical Chamber With a Diametrically Directed Axisymmetrical Jet (Issledovaniye dinamiki vikhreobrazovaniya v ploskoy tsilindricheskoy kamere s diametral'no napravlennoy osesimmetrichnoy struyey)

PERIODICAL: Nauchn tr Odessk. vyssh. morekhodn. uch-shcha, 1958, Nr 11 pp 12-31

ABSTRACT: In order that the combustion of a fuel in a combustion chamber be complete and correctly timed it is indispensable that the eddies formed in the chamber accomplish a complete change of air flow during the period  $\tau$  elapsing during a fuel injection. This, then, is the objective of the eddy formation. The examination is focused on a plane cylindrical chamber with a diametrically directed axisymmetric jet that issues from a nozzle located on the chamber contour. The well known relationships of the theory of free turbulent jets are used for the determination of the nozzle-exit flow parameters required to ensure the

Card 1/2

SOV 124-58 2 1761

Investigation of the Dynamics of Eddy Formation in a Plane (cont.)

needed eddy formation. Formulas are obtained for the evaluation of the magnitude of the required flow rate at the nozzle exit section for prescribed parameters of the operating process and engine dimensions.

V. N. Gase

Card 2 2

PISCHANENKO, V. V.

**Experimental Aerodynamics**

Dissertation: "Intensification of the Operating Process by Forced Disturbing Flow in Compression Ignition Engines." Cand Tech Sci, Odessa Higher Maritime School, Odessa, 1953.  
(Referativnyy Zhurnal — Mekhanika, Moscow, Mar 54)

SO: SUM 213, 20 Sep 1954

SOV 124-58-1-610

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 75 (USSR)

AUTHOR: Pishchenko, I. A.

TITLE: On Calculation Formulas for the Determination of the Discharge of a Submerged Broad-crested Weir (O raschetnykh formulakh dlya opredeleniya raskhoda podtoplennogo vodosliva s shirokim porogom)

PERIODICAL: Tr. Kiyevsk. gidromelior. in-ta, 1956, Nr 5, pp 37-41

ABSTRACT: The author recommends a subdivision of submerged weirs into submerged weirs and deeply submerged weirs. He designates as submerged weirs those in which the free surface is wavy or those in which in the absence of waves the pressure at the crest is in excess of the hydrostatic pressure; this occurs when the ratio of the depth of the tail water  $H_{t-w}$  to the head  $H_0$ ,  $n$ , is less than 0.95 ( $n=0.83$  to  $0.95$ ). He designates as deeply submerged weirs those in which the free surface changes from a wavy to a ripply shape, this occurs at  $n>0.95$ . The author recommends that the discharge of a submerged weir be determined by means of the formula

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$$Q = \sigma_n m b \sqrt{2g} H_0^{3/2} \quad (\sigma_n = m_n / m)$$

SOV 124 58-1-610

On Calculation Formulas for the Determination of the Discharge (cont.)

where  $\phi_n$  is the discharge coefficient of an unsubmerged weir. A table and a graph are provided for the determination of the coefficient of submergence  $\phi_n = f(\eta)$ . It is recommended that the discharge of a deeply submerged weir be determined from the formula

$$Q = \phi_n b h \sqrt{2g(H_0 - h)}$$

where  $\phi_n$  is the velocity coefficient on the submerged weir and  $h$  is the depth at the crest of the weir. In order to determine the depth at the crest of a deeply submerged weir, the author applies the momentum law to a fluid segment bounded by the section passing through the lower edge of the weir and a section located at that distance from the crest at which the flow begins to be parallel. It is recommended that the value of the coefficient  $\phi_n$  be taken from the TU & N [Tekhnicheskiye usloviya i normy (Technical Specifications and Norms)]. It should be noted that the submergence criterion relative to broad-crested weirs indicated in the TU & N appears to be a particular case of the submergence criterion proposed by M. D. Chertousov.

T. N. Astaficheva

Card 2/2

SILIN, Nikolay Aleksandrovich; PISHCHENKO, Ivan Akimovich;  
DIMINSKIY, Karol' Viktorovich; KONDAKOV, Vyacheslav  
Nikolayevich; STOVUN, Ivan Ionifovich; KOZOVSKIY,  
Izrail' L'vovich, doktor tekhn. nauk, otv. red.;  
MEL'NIK, T.S., red.; TURBANOVA, N.A., tekhn. red.

[Instruments for measuring parameters of hydraulic  
conveying of solid materials] Pribory dlia izmereniia  
parametrov gidrotransportirovaniia tverdykh materialov.  
[By] N.A.Silin i dr. Kiev, Izd-vo AN USSR, 1963. 197 p.  
(MIRA 17:3)



PISCHEV, V. M.; DANILOV, M. A.

Coal-tar lac as a material for coating cast-iron sewer pipes.  
Sbor. trud. NIIST no.10:126-131 '62.

(MIRA 15:10)

(Coal tar) (Protective coatings)  
(Sewer pipe)

PISHCHEV, V.M.

*Met* / The Influence of the Mechanism of Formation of a Casting on the Structure of Cast Iron. V. M. Pishchev. (Dokl. Akad. Nauk SSSR, Otdelenie Tekh. Nauk, 1955, (8), 107-111) [In Russian]. Results of an investigation of the influence of the mechanism of formation of a casting and of casting technology on the size and distribution of graphite as well as on the microstructure of the main mass of the metal are described. The study of the microstructure was carried out on specimens cut from castings of ingot moulds centrifugically cast in moulds with dry cores. It is concluded that the microstructure of metal indicates the method of

preparation of metal for casting while non-uniformity of the shape and size of graphite and of the microstructure of metal along the width and length of a casting, shows the mechanism by which the casting was formed. The above facts allow for the evaluation of the correctness of the chosen casting techniques. V. V.

PISHCHIK, Grigoriy Filippovich; VOLOSHCHENKO, Z.N., red.; LEUSHCHENKO,  
N.L., tekhn. red.

[Optical method of studying pressure on reinforced members]  
Opticheskii metod issledovaniia napriazhennogo sostoiianiia  
armirovannykh elementov. Kiev, Gos. izd-vo lit-ry po stroit.,  
arkhit. USSR, 1961. 44 p. (MIRA 15:2)  
(Reinforced concrete construction—Testing)

PISHCHIK, I.

For further development of specialization. Prom.stroi. 1 1975 8.05  
3 no.2:1-6 Mr-Ap '61. (MIRA 15:3)

1. Glavnyy inzhener "Ukrglavspetsstroya."  
(Ukraine--Construction Industry)

2-15-44 11.1

1. *Phragmites australis* (Cav.) Trin. ex Steud.

Sr.     Mr. V. L. ...  
          Mr. V. L. ...

1. The use of a method of aerosol immunization with live virus is being investigated with live virus vaccine and inactivated virus vaccine.

INSTITUTO NACIONAL DE MICROBIOLOGIA, EPIDEMIOLOGIA E IMUNOLOGIA, S. P.

2. The results were subjected to appraise the practical use of miniaturized vaccination with plague vaccine and to check and specify previously obtained data which testified that this vaccination method was safe and had a low reactivity. Dried plague vaccine was used in a dose of 150-200 million living microbes of the vaccine EB strain. Four 15-min. sessions took place with up to 120 persons at a time in a 112 m<sup>2</sup> room. On the days following vaccination, 157 persons were subjected to X-ray and hematological tests.

СЛРД 2/2

...ization with dry dust vaccine... 2017/2111

...that the sensitivity of this method is much lower than that of ... Conclusion: (1) ... with dust plague vaccine, using the above-mentioned dose, ... no distinct reaction but caused characteristic changes in the ... This method, tested under practical conditions on 54 ... allows the population to be mass-immunized against plague within a short time. There is 1 table.

378177221 August 8, 1961

Card 1/1

L 61913-65 EWT(m)/ENP(w)/EWA(d)/ENP(v)/T/ENP(t)/EMP(k)/ENP(z)/ENP(b)/EWA(c)

PT-4 MJW/JD/HW

ACCESSION NR: AP5017691

UR/0133/65/000/007/0649/0653  
621.746.57 : 669.15

32  
37  
B

AUTHOR: Alferova, N. S. (Doctor of technical sciences); Pishchik, N. S. (Engineer);  
Chukmasov, A. S. (Candidate of technical sciences)

TITLE: Influence of hot deformation on the structure and properties of centrifugally-cast Kh18Ni9Ti steel

SOURCE: Stal', no. 7, 1965, 649-653

TOPIC TAGS: alloy steel, hot forging, centrifugal tube casting, heat treatment, mechanical property, metallographic examination, cast structure

ABSTRACT: Two series of test castings were made by the centrifugal casting process: (a) castings with a thin columnar structure, and (b) those having a disoriented equiaxed structure. Series (a) had a higher as-cast plasticity and a lower strength. The influences of rolling 0 to 60% at temperatures ranging from 900 to 1300°C, and subsequent heat treatment (1050-1100°C, 45 min, water quench) on the structure and mechanical properties of the centrifugally-cast material were studied. All of the testing was done on wedge-shaped samples, which allowed the range of deformation to be imparted to a single specimen. The results of the experiments were plotted on

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three-dimensional diagrams with the coordinates: mechanical property (Y) vs. % hot deformation (X) vs. deformation temperature (Z). Optimal hot working conditions were found to be 40-60% deformation for the higher temperatures, with higher plasticity being attained for condition (z) above, for similar strength levels. After hot deformation at about 1200°C ( $\epsilon=60\%$ ) the mechanical properties for series (a) and (b) castings were:

|     | kg/mm <sup>2</sup> (Mn/m <sup>2</sup> ) | kg/mm <sup>2</sup> (Mn/m <sup>2</sup> ) | %     | %     |
|-----|-----------------------------------------|-----------------------------------------|-------|-------|
| I   | 67-69 (656-676)                         | 38-43 (372-421)                         | 50-54 | 75-79 |
| III | 67 (656)                                | 45 (441)                                | 40-45 | 71-73 |

After heat treatment, all of the samples showed a rise in plasticity and some lowering of strength. Further studies were made on the influence of a homogenization treatment prior to hot rolling and annealing, and this was compared with the above results. Little change in mechanical properties could be realized, although increased chemical homogeneity was achieved. Orig. art. has: 7 figures, 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy trubnyy institut (All-Union Scientific Research Institute of Pipes)

Card 2/3



L 61913-65

ACCESSION NR: AP5017691

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 000

OTHER: 000

*dm*  
Card 3/3

ACCESSION NR: AR4018328

8/0137/64/000/001/D038/D038

SOURCE: RZh. Metallurgiya, Abs. 1D237

AUTHOR: Pishchikov, G. P.; Kravchenko, A. G.

TITLE: Making boiler pipe of PZ, 12Kh2MFSR, EI756, EI713, EI695R, and EI17 steels

CITED SOURCE: Sb. Proiz-vo trub. Vy\*p. 9.M., Metallurgizdat, 1963, 13-18

TOPIC TAGS: pipe rolling, steel pipe, steel pipe manufacture, steel plasticity, steel puncture strength, rolling mill operation

TRANSLATION: Tests for warping were conducted on samples 90 and 250 mm in diameter at temperatures of 1,000-1,275 degrees every 50-25 degrees. The plasticity according to the amount of twists was tested to destruction, and the resistance to deformation was studied according to the intensity of twisting. It was determined that the plasticity of 12Kh2MFSR steel up to 1,270 degrees increases continuously (at 1,000 degrees, the number of twists is 22, at 1,250 degrees, 46), steel PZ changes little (at 1,000, the number of twists equals 20, at 1,100 degrees, 22, and at 1,250 degrees, 20). The intensity of twisting for all steel studied diminished proportionately with the increase in temperature. Thus, for three samples of

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12Kh2MFSR steel 250 mm in diameter, at 1,000 degrees, the intensity was zero; at 1,100 degrees, 6 kg, and at 1,250 degrees, 1.8 kg. In twisting samples of large diameters, the plasticity of the peripheral zones was higher than that of the central zones. For testing for puncture strength, conical samples were used, which made it possible to have a zone of pressing of 0-14.3%. On the basis of the results of tests, schedules for hot rolling of boiler pipes were worked up. Then, pipes measuring 89 x 11 mm were rolled on an automatic "140" installation, and pipes measuring 152 x 25, 168 x 26, and 173 x 26 mm were rolled on an automatic "400" installation. Forged faced samples of solid cross-section were used for rolling. Experimental rolling took place normally. The external surface of the pipes was good. The pipes of PZ steel had minor defects 200 mm on their ends. Pipes of EI713, EP17, and EI695R has minor defects on their internal surfaces. Tables are given of the parameters of piercing and set up of the mill, and also the basic industrial parameters for the manufacture of pipes of the above-mentioned types of steel.

SUB CODE: MM, IE

ENCL: 00

Card 2/2

ZHERDEV, I.T., doktor tekhn.nauk; IVONIN, A.I., kand.tekhn.nauk; FISHCHIKOV,  
G.P., inzh.; NIKOLAYEV, A.N., inzh.

Using strain-gauge method in determining specific pressures caused  
by piercing. Biol.nauch.-tekhn.inform.VNITI no.4/5:31-38 '58.  
(MIRA 15:1)

(Strain gauges) (Rolling (Metalwork))

KOLSOV, M.I.; MOLOZOV, A.M.; PASCHEV, V.I.

Research by Plant Laboratories and Institutes in 1956. Stal' 20  
no. 5:560 Je '60. (L.A. 11:1)  
(Chel' inst--Stal'--metallurgy)

P. P. PISCHIKOV, M. M.

AUTHORS: Gordin, I. P., Academician, Pischikov, M. M., engineer. 47-5-1 12

TITLE: A Technical and Economic Comparison Between the Martin and the Rotor Processes in Steel Production (Tekhniko-ekonomicheskoye sravneniye martinovskogo i rotornogo protsessov proizvodstva stali).

PERIODICAL: Kislород, 1957, Nr 5, pp. 1 - 6 (USSR).

ABSTRACT: At Obergauzer (Oberhausen, German Federal Republic) a method was worked out by means of which steel is produced from liquid pig iron in a rotating cylindrical furnace (rotor) with the application of oxygen (reference 1). The elaboration of such a method was carried out for two reasons: on the one hand there is a shortage of scrap (and therefore its price is high) and on the other hand there is the necessity of using pig iron with a high content of phosphorus, manganese, magnesium and sulfur. This is of importance for Germany as the local metallurgic industry is forced to use the various sorts of iron ore. The use of pig iron with a high content of phosphorus (0,5-1,7%) is not economic in stationary Martin furnaces. It is also not useful for the ordinary Thomas process. Therefore it was tried to remove in the rotor steel production the deficiencies occurring in the production from such raw materials in Martin furnaces and in converters, and at the same time to secure a good quality of the steel. Independent from the specific character of German

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A Technical and Economic Comparison between the Martin and Rotor Processes in Steel Production. 67-5-1/12

metallurgic industry the authors thought it useful to compare from the technical and economic viewpoint the steel smelting by means of the rotor process and of the Martin furnace in the case of an increased pig iron content in the charge. The meltings in the Martin furnaces with an increased content of pig iron in the charge (to 100% inclusive) with the application of oxygen were carried out in 200-ton Martin furnaces of the "Zaporozhstal'" works during 1954-55. They formed part of the scientific research works on the use of oxygen for the intensification of the Martin process. The author, who described the rotor process, maintains that the steel produced according to this method is in no way inferior to Martin steel. He thinks the supplementing special investigations necessary, however. In the steel smelting by means of a rotor sulfur is removed better than in the Martin furnace. Its content in the finished metal can be reduced to about 0,01%. The content of phosphorus is, as a rule, not higher than 0,030%. Such favorable results of de-phosphorizing and de-sulfurizing were obtained in the working up of pig iron of the most different compositions. For the technical and economic evaluation of the steel production by means both methods the prime cost of steel and the investments in national economy were taken into account. As a basis of the calculation the technical economic parameters of the Martin furnaces and of the rotor plant of the "Zaporozhstal'" works were taken. Table 1 shows the calculation of the prime

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A Technical and Economic Comparison Between the Martin and Rotor Processes in Steel Production. 67-5-1/12

cost for 1 ton of steel smelted by different methods. The control of the material balance carried out showed that the consumption of 155 kg of ore for 1 ton of steel was more acceptable than had been assumed in table 1. In this case the steel worked up by means of the rotor process would be 2,86 Rubels per ton more expensive than Martin steel. In spite of a certain relativity of the calculation we can state that, with regard to prime cost as well as to investments of national economy, the rotor process does not show any essential advantages compared with the Martin process. Besides, some disadvantages are to be considered: Although, compared to the converter production the range of types becomes greater, it is hardly possible to smelt all steel alloys which can be smelted in the Martin furnace. Secondly it will hardly be possible in a plant with only a rotor plant to use all the scrap in circulation, which would again lower the technical and economic parameters. With the values at hand no definite judgement of the technical and economic advantages of this new process of steel production can be made. A relative evaluation permits already the assumption that this process does not have any essential advantages. Taking into consideration the specific raw material conditions in the German Federal Republic the use of the rotor process can be of greater actuality for her than for the Soviet Union.

Card 3/4



A Technical and Economic Comparison between the Martin and Rotor Processes in steel production. 67-5-1/12

There are 2 tables, and 2 references, 1 of which is Slavic.

AVAILABLE: Library of Congress.

1. Steel production-Comparison 2. Metallurgy

Card 4/4



ACCESSION NR: AP4045816

S/0148/64/000/009/0195/0201

AUTHOR: Romenets, V. A.; Afonin, V. T.; Pischikov, M. M.

TITLE: Smelting stainless steel with chromite in arc furnaces

SOURCE: IVUZ. Chernaya metallurgiya, no. 9, 1964, 195-201

TOPIC TAGS: steel, steel smelting, chromium steel, arc furnace, stainless steel, chromite, chromium steel smelting, ferrochromium

ABSTRACT: The rise in the use of stainless steel has increased the requirements for refined ferrochromium, the supply of which is limited. Therefore, chromite is currently being investigated as a source of chromium for stainless steel. It is added directly to the charge, improving metal degasification and eliminating non-metallic inclusions. In the present study, three kinds of chromite from Kazakhstan were used containing: 48.66-54.00%  $\text{Cr}_2\text{O}_3$ ; 6.00-4.43%  $\text{SiO}_2$ ; 14.4-11.8%  $\text{MgO}$ ; 10.60-13.84%  $\text{Fe}_{\text{total}}$ ; 0.021-0.008%  $\text{P}_2\text{O}_5$ ; 0.040-0.077% S. The chromium in the chromite was reduced by the silicon in the silico-chromium compound, by the 45% ferrosilicon content, as well as by the aluminum in the steel scrap. The steel was melted in three ways. In the first, all the chromite was added directly to the charge. In the second, two-thirds of the chromite was added at the beginning, and one-third at the end of the process. The third method consisted of melting

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ACCESSION NR: AP4045816

low-carbon steel and high-chromium scrap, chromite and silico-chromium. Oxygen was blown through the furnace for 1 hr. 20 min. to 1 hr. 50 min. after beginning the process. Then the remaining chromite was added and oxygen was again introduced until the carbon content reached 0.12-0.18%. After this, limestone was added up to 12 kg/metric ton; and 10-15 min. later the slag was removed. According to F. P. Yedneral, the usual ratio of slag to metal is 0.14. In the described tests this figure was changed to 0.18-0.31. The best results were obtained with 17% chromite (charge weight), where the ratio did not exceed 0.22. When the chromite weight was 20% the ratio reached 0.24 and it was inexpedient to increase the quantity of chromite further. The quality of the steel produced from chromite in these tests was no worse than that produced by the usual method. The melting loss of chromium varied between 8.05 and 18.99%. When the oxygen was added right at the beginning there was a high melting loss of chromium. Thus, the oxygen should be added only when the charge is completely melted and the metal is at a high temperature. In two melts, when the oxygen was added for 10 minutes under a pressure of 9.0 atm after 90-95% of the charge was melted, the melting loss of chromium was the lowest. The duration of charging was increased by 5-10 minutes due to the use of chromite, so that the duration of the process was also increased. The furnace lining remained the same as for the usual melts when the chromite content was below 20%. The cost of steel and capital investments was lower with chromite than for the usual method. The authors conclude that use of up to 17% chromite

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ACCESSION NR: AP4045816

chromite does not impair the technological process, nor lower the labor productivity. The use of chromite lowers the consumption of refined ferro-chromium, and the chromium is utilized much better with chromite than by the usual methods. Orig. art. has: 3 tables and 4 chemical equations.

ASSOCIATION: Moskovskiy Institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 29Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

Card 3/3

MAKHOTIN, Ye.A., inzh.; PISHCHIKOV, R.S., inzh.; FILIPPOV, F.P., inzh.

New earthmoving machinery for water management construction.  
Trudy Giprovdkhoza no.25:41-51 '63. (MIRA 18:6)

ZHEREBTSOV, V.V., inzh.; PISHCHIKOV, R.S., inzh.; FILIPPOV, F.P., inzh.

Using earthmoving machinery in water management. Trudy Giprovd-  
khoza no.25:52-71 '63. (MIRA 18:6)

PISHCHIKOV, V.A., inzh.

Effect of the parameters of some elements of the shuttle on  
the formation of the zigzag stitch. Izv. vys. ucheb. zav.;  
tekh. leg. prom. no.5:132-146 '63. (MIRA 16:12)

1. Kiyevskiy tekhnologicheskoy institut legkoy promyshlennosti.  
Rekomendovana kafedroy mashin i apparatov.



KARLSEN, G.G., doktor tekhn.nauk, prof.; BOL'SIAKOV, V.V., doktor tekhn.nauk, prof.; KAGAN, M.Ye., doktor tekhn.nauk, prof.; SVENTSITSKIY, G.V., kand.tekhn.nauk, dotsent; ALEKSANDROVSKIY, K.V., dotsent; BOCHKAREV, I.V., kand.tekhn.nauk, dotsent [deceased]; POLOMIN, A.I., doktor tekhn.nauk; Prinimali uchastiye: KOLOSHIN, O.P., inzh.; SILIN, V.N., dotsent, kand.tekhn.nauk; PISCHIKOV, Y.G., kand.tekhn.nauk, dotsent, nauchnyy red.; IVANKOV, P.T., dotsent, red.; BORODINA, I.S., red. izd-va; RUDAKOVA, N.I., tekhn.red.

[Wooden structures] Dereviannye konstruktsii. Izd.3., perer. i dop. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1961. 642 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for KarlSEN).

(Building, Wooden)

SOV 137 57-10 1919

Translation from Referativnyi zhurnal Metallurgiya 1957 Nr 10 p 167 USSR

AUTHOR Pischikov, V.G.

TITLE Bent Shapes for Building Framing (Gnutnye profilnye otkrytye davush bikh konstruktivny zdanii)

PERIODICAL V sb Ratsionalizatsiya profiley prokata Moscow Prof z dat 1956 pp 211-219

ABSTRACT Examples are cited of the use of bent shapes for building framing and how this provides a considerable saving of metal. Examination is made of possible shapes, and the need for developing a GOST government standard for this purpose is noted.

M 15

Card 1 1

PISCHINGER, E.

History of the soda factory in Inowroclaw. p. 381. (PRZEMYSŁ CHEMICZNY,  
Vol. 10, No. 8, Aug. 1954, Warszawa, Poland)

SC: Monthly List of East European Accessions, (SEAL), IC, Vol. 3, No. 12, Dec.  
1954, Uncl.

TCMASZEWSKI, Jerzy; PISCHINGER, Ernest, TRYPKO, Mieczyslaw

Determination of the solubility in terms of logarithm  $\log S$  under temperatures of 90° and 100° by using the semi-empirical Chemia stosow / 2 no 1:29-34 1965.

1. Department of Chemical Technology of Nicholas Copernicus University, Torun. Submitted June 25, 1964.

SZUFARSKI, Zbigniew; PISCHINGER, Ernest

Studies on the solubility of sodium carbonate, sulfate and chloride in sodium hydroxide solutions. Pt. 1. *Przem chem* 41 no.12:695-698 D '62.

1. Katedra Technologii Chemicznej, Uniwersytet im. M. Kopernika, Torun.

**POLAND/Chemical Technology - Chemical Products and Their  
Application, Part 2. - Elements, Oxides, Mineral  
Acids, Bases, Salts. - Soda Industry.**

H-8c

**Abs Jour** : Ref Zhur - Khimiya, No 14, 1958, 47335

**Author** : H. Fischinger, H. Konecny

**Inst** :

**Title** : Influence of  $\text{NH}_3$  Introduction into Carbonisation Column  
on Performance of Carbonisation Process.

**Orig Pub** : Przem. chem., 1957, 13, No 9, 524-527

**Abstract** : It was experimented at a factory with the introduction  
of  $\text{NH}_3$ -gas into the middle of a carbonisation column at  
 $40^\circ$ , and the column performance reached 75% (it was 65%  
without  $\text{NH}_3$  introduction). It shows that it is necessary  
to introduce  $\text{NH}_3$  into the column in summer time, when  
the temperature of the cooling water is high.

MDI

Card 1/1

KONECZNY, Henryk; CYLKA, Zofia; PISCHINGER, Ernest

Analysis of the liquid phase in the carbonation process in the  
soda industry. Przem chem 41 no.6:312-313 Je '62.

1. Katedra Technologii Chemicznej, Uniwersitet im. M.Kopernika,  
Torun.

KONECZNY, Henryk; SZWED, Zdzislaw; PISCHINGER, Ernest

Influence of expansion upon the yield of the soda processes.  
Przem chem 41 no.7:382-386 J1 '62.

1. Katedra Technologii Chemicznej, Uniwersytet M.Kopernika,  
Torun.

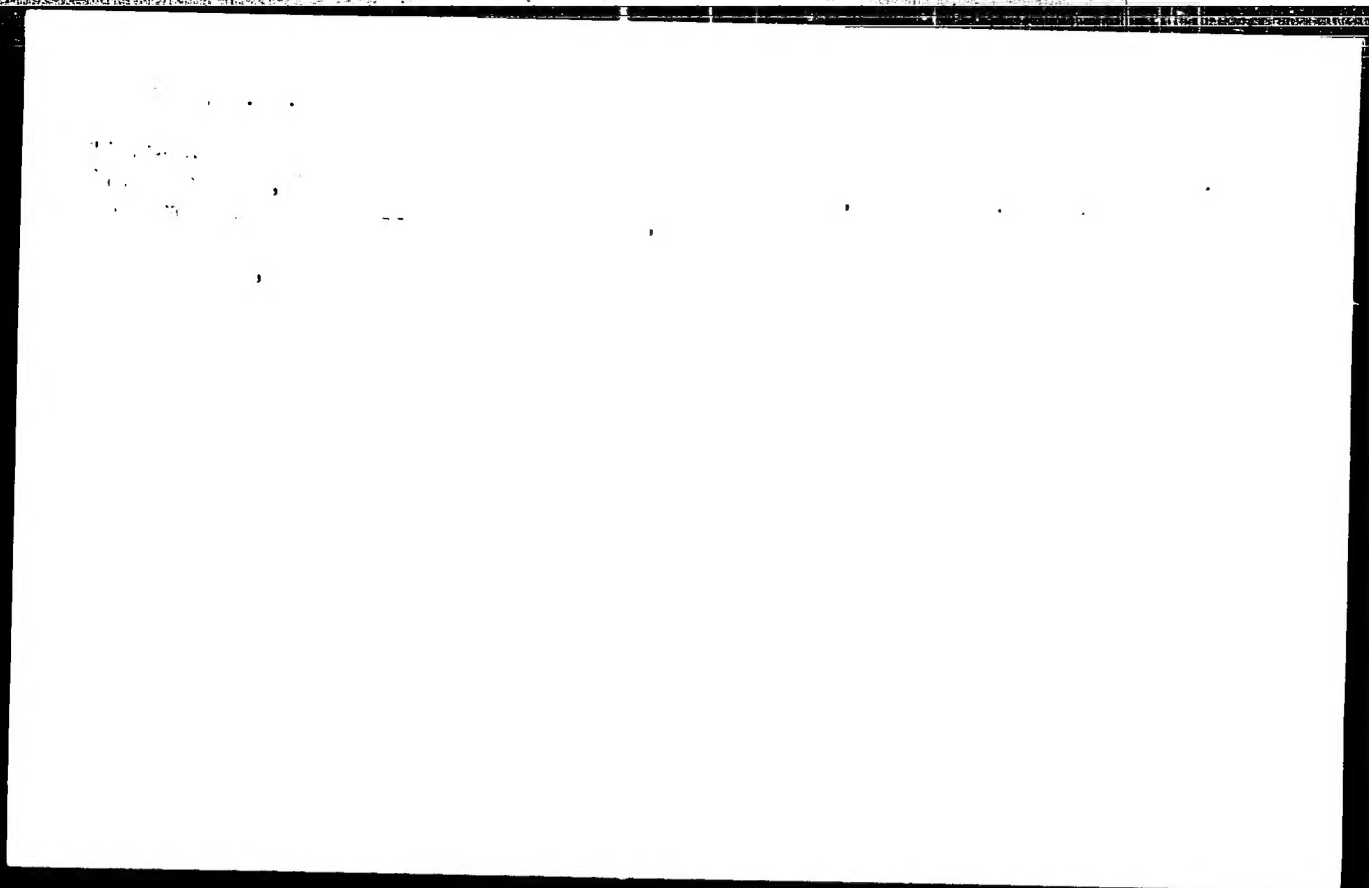


**Sodium sesquicarbonate. I. Physical properties.** By J. Pacholowski and J. J. Tomaszewski (Univ. of M. Koper-  
niski, Torun, Poland). *Przemysl Chem.* 37, 340-3 (1960)  
(English summary).—Decomp. of Na sesquicarbonate  
(trona) and the influence of pressure on the b.p. of soles,  
from which trona can be obtained were detd. The decomp.  
of trona takes place at 86-7°. However, the decomp. at  
this temp. is very slow and that is why trona can be dried at  
80-70° depending on the type of drier. In an atm. of CO<sub>2</sub>  
the drying can even be carried out at 80° with little decomp.  
The relation between the pressure and the b.p. of soles of  
Na<sub>2</sub>CO<sub>3</sub> + NaHCO<sub>3</sub> is in accordance with Dubring's law,  
i.e.  $(t' - t)/(t' - t_0) = \text{const.}$ , where  $t'$  and  $t$  are boiling  
temps. of soles at 2 different pressures and  $t_0$  and  $t_0'$  are  
b.p.s. of pure H<sub>2</sub>O under the same pressures. In soles which  
are in equil. with trona the ratio Na<sub>2</sub>CO<sub>3</sub>:NaHCO<sub>3</sub> has only  
a slight effect on the above dependence. II. System Na<sub>2</sub>CO<sub>3</sub>-  
NaHCO<sub>3</sub>-H<sub>2</sub>O. *Ibid.* 411-15.—The examn. of the sys-  
tem confirmed the presence of unstable NaHCO<sub>3</sub> ( $\beta$ -NaHCO<sub>3</sub>)  
described by Wegscheider and Mehl (*C.A.* 32, 4335). Two

equil. polytherms were prepd. of the above system. In  
one polytherm the concns. are expressed in wt. % and in the  
2nd polytherm the concns. are expressed in units which are  
used in the Polish soda plants (mval./20 ml.). III. Fac-  
tors influencing the size of crystals and yields of crystalliza-  
tion. *Ibid.* 408-9.—The rate of cooling was investigated  
of concd. soles of Na<sub>2</sub>CO<sub>3</sub> + NaHCO<sub>3</sub> and also the influence  
of addn. of different salts to the above soles in order to ob-  
tain large crystals and best yields of Na sesquicarbonate.  
The optimum cooling rate lies between 1 and 6°/min. Small  
addns. of Al(BO<sub>3</sub>)<sub>3</sub>, Fe(BO<sub>3</sub>)<sub>3</sub>, Na<sub>2</sub>SO<sub>4</sub>, and NaCl have no  
influence on the crystal size and the yield of crystn. Large  
addns. of NaCl exerted an important influence on the crys-  
tal size (crystals twice as large were obtained) and on the  
yield of crystn. (which reached even 140% of the yield ob-  
tained without addn. of large quantities of NaCl). Soles  
without any addns. but with the above-mentioned cooling  
rate produced crystals from 0.0075 (for 6°/min.) to 0.018  
mm. (for 1°/min.). The addn. of 40 g. NaCl/l. of soles  
increased the crystal size to 0.0380 mm. F. J. Hendel

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**CIA-RDP86-00513R001341030005-4**



**APPROVED FOR RELEASE: 07/13/2001**

**CIA-RDP86-00513R001341030005-4"**

PISCHIKOV, M.M. (Moskva).

Using oxygen in melting steel out of charges having high cast  
iron content. Izv. AN SSSR, Otd. tekhn. nauk no.7:103-112 JI '57.  
(Open-hearth process) (MLRA 10:9)

BARDIN, I.P., akademik; PISCHIKOV, M.M., inzhener.

Technical and economic comparison of the open-hearth and rotor  
steelmaking processes. Kislород 10 no.5:1-6 '57. (MIRA 11:4)  
(Steel--Metallurgy)